MetroWest Phase 1

Addendum to the Outline Business Case

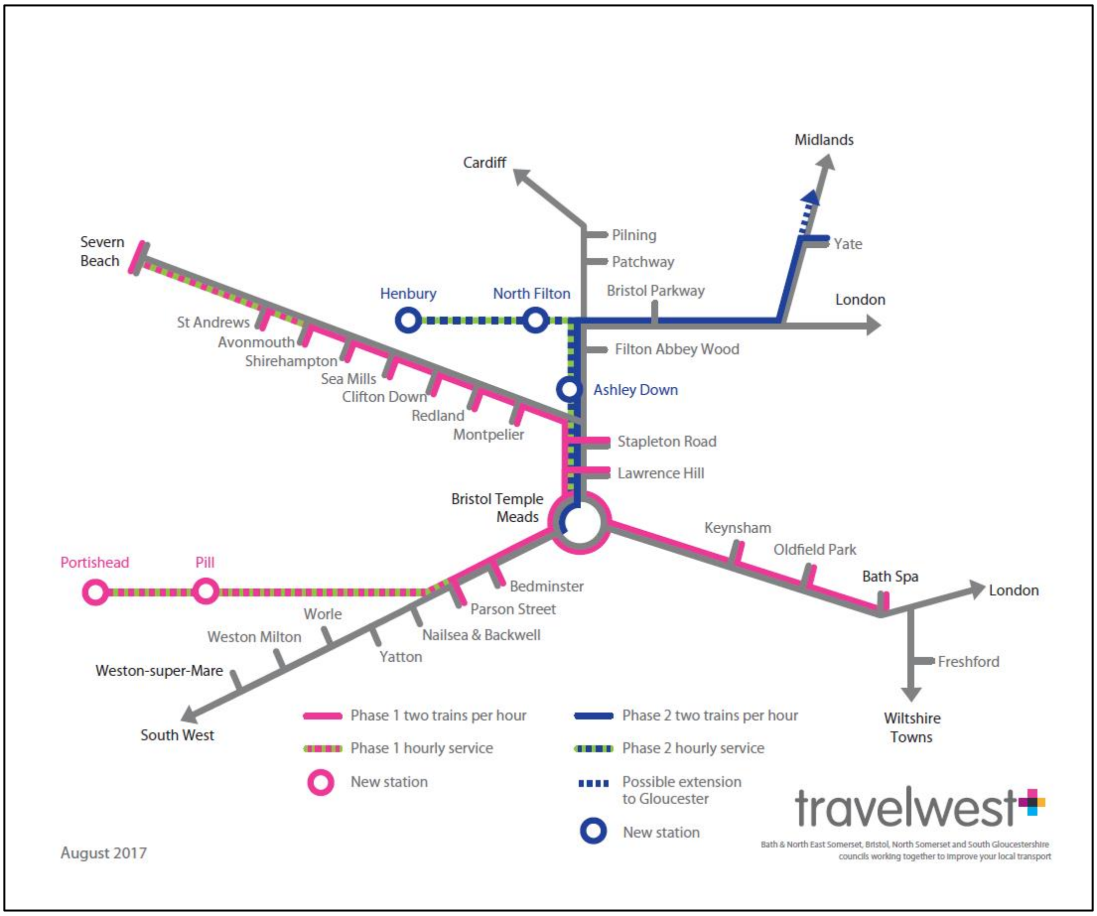
1. Background

The Outline Business Case (OBC) for MetroWest Phase 1 was submitted to the Department for Transport in December 2017 as part of Large Local Major Scheme bid for funding. The OBC was subject to DfT technical scrutiny in early 2018.

The West of England (WoE) Councils comprising of Bath & North East Somerset, Bristol City, North Somerset and South Gloucestershire, together with the West of England Combined Authority are progressing plans to deliver a series of strategic enhancements to the local rail network over the next five years and beyond, through the MetroWest Programme. The aim of the MetroWest Programme is to establish a 'Metro' local rail network, similar to comparable sized city regions, through targeted investment in strategic rail corridors, including existing lines, freight only lines and dis-used lines.

The West of England is a dynamic city region, with a population of more than 1.1 million people, over 43,000 businesses and an economy worth over £31 billion a year. It is a highly productive economy, with GVA per capita higher than the national average. The city region is one of the few areas of the UK that is a net contributor to the Treasury. The West of England faces serious transport challenges and these will become more acute with the anticipated scale of growth in the area. The forecast numbers of people living and working in the area will increase demands on the transport system, which will have significant economic, social and environmental impacts. While the West of England has good rail links to London, the Midlands, South Wales and the South West, the local rail network is under-developed for the size of the city region. The geographic reach of the local rail network is limited and the train service frequency is irregular in places and some corridors have a poor frequency or not clock-face.

Figure 1. MetroWest Phase 1 & Phase 2



The MetroWest Programme currently comprises:

- the MetroWest Phase 1 scheme
- the MetroWest Phase 2 scheme
- the Portway Park & Ride station scheme
- a range of new station/re-opening schemes

As shown in figure 1, MetroWest Phase 1, proposes to enhance the Severn Beach Line and the Bath Spa to Bristol Line to operate a half hourly train service and re-open the Portishead Line with an hourly train service. Two new stations are proposed, at Portishead and Pill. The new train services will also service 16 existing stations.

2. Summary of the Outline Business Case (December 2017)

The estimated capital out-turn cost of the scheme as set out in the OBC is £116.4M, of which £69.5M has been identified, leaving a funding gap of £46.9M. The scheme benefit to cost ratio is 3.6 with wider economic impacts and scheme net present value is £244,760M. The forecast passenger demand in the opening year is 958,980 and 1,295,103 per annum by 2036. Train path modelling (Railsys) has produced working timetables for the proposed train services and identified a requirement for a total of five train sets comprising of two existing train sets currently utilised on the Severn Beach Line and three additional train sets.

The forecast revenue position of the scheme is as follows. The total revenue liability for the promoting authorities for the first three years (under DfT policy) is £2.069M. The residual forecast subsidy requirement for year four and five totals £0.282M and from year six the scheme generates a net revenue surplus. By the end of year 10 the scheme is forecast to generate a revenue surplus of over £1M per annum. Further discussion is required with the DfT and incumbent train operator regarding the proportion of train operator costs prior to the start of train service that are attributable to the scheme, as some of the costs quoted appear to be industry costs.

The level of support for the scheme is exceptionally high. Formal scheme consultation was undertaken in late 2017 in connection with the requirements of the 2008 Planning Act, for the scheme Development Consent Order application. The consultation resulted in 1,055 responses, of which 95% supported the scheme entirely or mainly. As a result of the consultation a small number of minor tweaks were made to the scheme post OBC, mainly in relation in interfaces with on-street parking, bus services, and pedestrian and cycle routes.

Summary of the scheme benefits:

- **an increased local economy** by generating £264M of Gross Value Added (GVA) in first ten years from opening) and creating 514 net new permanent jobs
- **enhanced rail capacity** by delivering over 800 additional seats per hour for the local rail network, which in turn will extend the benefits of Network Rail's Western Route Modernisation Programme
- **a reliable and more frequent public transport service**, directly benefitting 180,000 people within 1km of 16 existing stations, with enhanced train service frequency
- **an increased number of people living within 30 minutes travel time of key employment areas**, such as TQEZ,
- **reduce highway congestion** on arterial corridors, including A369 between Portishead and Bristol, significantly improving network resilience

- **competitive journey times** from Portishead and Pill to Bristol Temple Meads (around 23 minutes)
- **improved accessibility** to sites for new homes and employment development in proximity to the rail corridors and bring an additional 50,000+ people within the immediate catchment of the rail network with new stations at Portishead and Pill
- **reduced overall environmental impact**, resulting in improved air quality, on key arterial highway routes
- **an attractive mode choice** and capacity for journeys to work (alternatives to single occupancy car-based travel) addressing long-term car dependency
- wide ranging **social/health benefits**

The wider scheme outputs include:

- high value for money with a **Benefit to Cost Ratio of 3.61** with wider economic impacts, giving £3.61 of quantified benefits for every £1 invested to implement the scheme
- **forecast revenue** surplus every year from year 6 onwards
- supporting the **delivery of the 105,000 new homes and 82,500 new jobs** identified in the WoE Joint Transport Study and WoE Joint Spatial Plan

3. Summary of Changes to the Scheme since December 2017

Strategic Case

The option to extend the train service beyond Bath Spa to Westbury is now being developed to GRIP4 and is gaining greater support from the industry as it would provide a better fit for the corridor between, long distance, regional and local train services. The infrastructure works required for this option is limited to enhancement of five pedestrian/accommodation level crossings. The initial indications are that the extension to Westbury could yield a capital cost saving of £1M to £2M.

Economic Case

A high level assessment of the changes to WebTAG since December 2017 has been undertaken and indicates a very slight potential reduction to the scheme BCR. For the December 2017 OBC sensitivity tests of the scheme BCR were undertaken and further sensitivity tests were undertaken in February 2018 in response to DfT technical scrutiny of the OBC.

Further train path modelling (Railsys) has been undertaken since December 2017 by Network Rail. This has identified that it is not possible to overlay the proposed MetroWest Phase 1 additional hourly (local stopping service) on the Severn Beach to Bath Spa corridor in combination with the existing local service and achieve a half hourly interval frequency, with four train sets. Previous train path modelling undertaken by Network Rail indicated that it would be possible to operate the proposed MetroWest Phase 1 train service on the corridor with four train sets (although achieving a half hourly interval was challenging) and this assumption was used for the December 2017 OBC.

The modelling since December 2017 undertaken by Network Rail for franchise aspirations shows that to achieve a service internal close to a half hourly pattern and meet timetable planning rules including minimum turnaround times, five train sets will be required to operate Severn Beach to Bath Spa. While five train sets are required, the utilisation of the fifth train set would be very limited, based on terminating at Bath Spa (utilising the proposed Bathampton Turnback). The modelling identified that it would be possible to extend the service to Westbury with five train sets and achieve close to the half hourly interval frequency and achieve compliance with timetable planning rules. The modelling includes a working timetable for the Severn Beach to Westbury corridor.

The requirement for an additional train set has implications for the scheme economic appraisal and the forecast revenue position for the proposed train services. While the increase in the total number of train sets required for the scheme has increased from five to six train sets (five train sets for the Severn Beach to Bath/Westbury corridor and one train set for the Portishead corridor), this includes two existing train sets operating on the Severn Beach Line. Therefore, the net impact is an increase from three additional train sets to four additional train sets.

A spreadsheet based assessment of the impact of the additional train set on the scheme economic appraisal is set out the table below. The BCR's have been calculated pivoting off the OBC economic appraisal and provide an order off accuracy of approximately + or - 0.2 compared with full WebTAG economic appraisal refresh.

Table 1.

Scenario	**No of train sets**	**Bathampton or Westbury**	**Capital Cost Assumption**	**BCR with wider impacts**
OBC Dec 17	5 (Phase 1A = 4, Phase 1B = 1)	Bathampton	£116M estimated out-turn	3.6
Post OBC Scenario 1	6 (Phase 1A = 5, Phase 1B = 1)	Bathampton	As OBC	2.5
Post OBC Scenario 2	6 (Phase 1A = 5, Phase 1B = 1)	Westbury	As OBC but with £1M capital cost reduction	3.1

Management Case

The scheme governance has recently been revised to reflect the involvement of the West of England Combined Authority (WECA) in the development and delivery of the scheme. As a result of the changes North Somerset (NSC) and WECA are now jointly promoting the scheme. These revised arrangements provide flexibility for the progression of the technical work for both the Severn Beach to Bath Spa/Westbury corridor (Phase 1A) and the Portishead corridor (Phase1B), while retaining joint reporting through to the WoE Joint Committee. This also means the project remains one single major scheme.

Since the completion of the OBC in December 2017, the development of the scheme has encountered some challenges which have resulted in programme slippage. Firstly, the scheme funding uncertainty has caused some concerns locally particularly in respect of the continued draw down of Local Growth Funding (LGF), particularly regarding the revenue reversion liability for the authorities should the scheme not be delivered, resulting in no assets. To date over £11M of LGF has been drawn down by the scheme and £5M of other local capital funding sources. Under accounting rules, should the scheme not be delivered the authorities would have to pay back the LGF and other local capital funding from revenue sources. Clearly, clarification on the scheme funding would reduce the risk of the scheme not being delivered and the risk of revenue reversion arising.

Secondly, the scheme consenting requirements are particularly complex and it is taking longer to complete the technical work and satisfy the legislative requirements and the requirements of statutory bodies. A Development Consent Order (DCO) is required for powers to build and operate the scheme because there is more than 2 kilometres of railway works outside the existing operational railway (2008 Planning Act). The DCO process is extremely front loaded and is not well aligned with Network Rail's GRIP process. This has been very challenging for Network Rail and a range of additional outputs have had to be undertaken beyond GRIP 4 design outputs, for the DCO application. This additional work has impacted the scheme programme and is also related to the complex environmental consents required for the scheme.

Thirdly, the scheme requires environmental consent from Natural England through the Habitats Regulation Assessment (HRA) process, due to the Avon Gorge Special Area of Conservation. Although Natural England are the determining body for HRA, all DCO schemes that require HRA must submit a draft HRA as part of their DCO application. A European Court ruling in 2018 has potentially changed goal posts for the HRA process and this has led to considerable additional work to ensure the scheme has a robust case through the four stage HRA process including stage 4 Imperative Reasons for Overriding Public Interest (IROPI).

The overall impact of the above challenges is the scheme programme has slipped by 18 to 24 months, in respect of the scheme opening date. Based on achieving further clarification on the scheme funding, achieving submission of the DCO application in July 2019, commissioning preparation for procurement of GRIP 5 over the summer of 2019 and completing GRIP 5 and the DCO process and environmental consents in parallel, the revised scheme opening date is 2023.

Commercial Case

Further development of the scheme commercial approach is underway. Discussions are taking place with Network Rail at a strategic level about the balance of risk and liabilities for the authorities, particularly given the wide range of railway and none railway scheme interfaces and that the scheme entails 16 kilometres of railway works. MetroWest Phase 1 is unprecedented as a local government third party promoted rail scheme. The scheme is the first third party rail DCO scheme (and only the second passenger rail DCO scheme). This together with the extent of railway works over 16 kilometres, is testing the limits of what the authorities could realistically take on in terms of risk and liability exposure, given the respective size of the authorities.

Finance Case

Following ongoing engagement with the DfT since late 2017, the Secretary of State for Transport rh Chris Grayling MP visited Portishead on 4th April 2019 and met with the Leader of North Somerset Council and the Mayor of the West of England Combined Authority. On the 5th April, the Secretary of State wrote to the Leader and Mayor confirming that he would provide £31.9M, on the basis that a further £15M is allocated locally, below is an extract from the letter"

> *"As you know, improving rail services for the people of the Bristol area is important to this Government. I firmly support MetroWest and consider its successful delivery, including the Portishead element, a priority in Control Period 6.*
>
> *I welcome your effects to identify local funding options and the further £15M you think is possible through the Economic Development Fund mechanism, reducing the funding gap from £46.9M to £31.9M. I also note the consideration that has been given to light rail and tram-train options and that the MetroWest scheme will be future proofed to facilitate these.*
>
> *I am content to provide the further £31.9M required. However, this is on the basis that the £15M of local funding can be secured as you set out and that MetroWest passes successfully through the Department's Rail Network Enhancements Pipeline (RNEP) process."*

North Somerset Council agreed to allocate its share of Tier 3 business rate funding at its meeting of 12th February 2019, totalling £15M. This is subject to confirmation by the WoE Business Rates Pooling Board and WECA as the administering body to authorise the allocation of the £15M to the Council. This means that subject to the confirmation of the £15M, the project is now fully funded.

As set out above under the Economic Case heading the number of train sets required to operate the proposed MetroWest Phase 1 train service has increased from five sets as set out in the December 2017 OBC to six sets (with the net requirement increasing from three sets to four sets). This increase represents approximately a 33% increase in scheme operating costs. The BCR remains well above 2 for both the Bath Spa and the Westbury option, with the Westbury option performing better due to increase revenues, as shown above in table 1. The revenue position in summary is as follows. The revised total forecast subsidy for the first three years is approximately £5.4M. For year four, five and six the residual forecast subsidy totals £0.74M and the service is forecast to break even in year 7. This represents a considerable increase above the total forecast subsidy for the first three years set out in the December 2017 OBC of £2.069M, drawing on train path modelling undertaken by Network Rail.

The authorities have planned to make budget provision for a total subsidy of £2.069M during the first three years of service and are currently in negotiations with the DfT on a revenue support agreement for either the Bath Spa or Westbury option, taking into account the levels of revenue support that other local authorities have made towards recent enhancements to local and regional trains services in other parts of the country.

2nd May 2019